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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,568	12/09/2003	Mark Bird	7089-14	5086

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WOODARD, EMHARDT, MORIARTY, MCNETT & HENRY LLP
BANK ONE CENTER/TOWER
111 MONUMENT CIRCLE, SUITE 3700
INDIANAPOLIS, IN 46204-5137

EXAMINER

LAZO, THOMAS E

ART UNIT PAPER NUMBER

3745

DATE MAILED: 03/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/731,568

Applicant(s)

BIRD ET AL.

Examiner

Thomas E. Lazo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

The abstract of the disclosure is objected to because the language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "One preferred embodiment of the present invention," and "In a further embodiment, the invention provides," etc. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 10-14, 20, 21, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Cobo et al. (6,305,162). Cobo et al. discloses an auxiliary hydraulic drive system, with a hydraulic pump 32 operable to provide hydraulic flow having an optimum flow level and a flow control valve 122 in communication with the hydraulic flow, an engine speed sensor 112 or fluid flow sensor 113 to measure total hydraulic fluid flow in a system, a controller 22 coupled to the sensor 112 and operable to initiate additional fluid flow in the system if the total fluid flow drops below a minimum, wherein the flow control valve 122 operates to divert excess flow above the optimum flow level away from the implement, the flow control valve 122 reduces the amount of diverted flow as the hydraulic flow from the hydraulic pump 32 is reduced and the

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controller is operable to reduce the fluid flow in the system if the total fluid flow exceeds a maximum. See Cobo et al. col 4, line 38 to col. 7, line 10.

Regarding claims 20, 21, and 24, Cobo et al. discloses a method of providing hydraulic power to an implement having an optimum fluid flow level by providing an hydraulic fluid flow to an implement having an optimum flow level, monitoring the total hydraulic fluid flow, diverting excess hydraulic fluid flow above the optimum level away from the implement, increasing the hydraulic fluid flow if the total hydraulic fluid flow drops below a minimum, and reducing the hydraulic fluid flow if the total hydraulic fluid flow exceeds a maximum, wherein the step of monitoring the total hydraulic fluid flow includes an engine speed sensor. See Cobo et al. col 4, line 38 to col. 7, line 10.

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Lunzman (5,680,760). Lunzman discloses an auxiliary hydraulic drive system, with a hydraulic pump 13 operable to provide hydraulic flow having an optimum flow level and a flow control valve 23 in communication with the hydraulic flow, wherein the flow control valve 23 operates to divert excess flow above the optimum flow level away from the implement and the flow control valve 23 reduces the amount of diverted flow as the hydraulic flow from the hydraulic pump 13 is reduced.

Claims 3-5 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Chatterjea et al. (4,779,416). Chatterjea et al. discloses an auxiliary hydraulic drive system with a total hydraulic flow, a primary hydraulic pump 16 operable to provide hydraulic flow for an

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implement, a flow control valve 32 in communication with the hydraulic flow, a secondary hydraulic pump 18 selectively operable to provide additional hydraulic flow, a control system operable to engage the secondary pump 18 when the total hydraulic flow drops below a minimum flow level, a fluid flow valve 32, and a sensor 84 to detect the total hydraulic flow, wherein the flow control valve 32 operates to allow an optimum flow rate and divert the excess flow amount when the total hydraulic flow exceeds the optimum flow rate, the control system operates to disengage the secondary pump 18 when the total hydraulic flow exceeds a maximum flow level, and the control system is selectively adjustable to a plurality of flow rates. See Chatterjea et al. col. 4, line 33 to col. 6, line 14.

Claims 3-5 and 7-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Peterson (3,952,510). Peterson discloses an auxiliary hydraulic drive system with a total hydraulic flow, a primary hydraulic pump 15 operable to provide hydraulic flow for an implement, a flow control valve 18 in communication with the hydraulic flow, a secondary hydraulic pump 30 selectively operable to provide additional hydraulic flow, a control system operable to engage the secondary pump 30 when the total hydraulic flow drops below a minimum flow level, a fluid flow valve 18, a sensor 90 to detect the total hydraulic flow, and a third hydraulic pump 16 operable by the control system to provide additional hydraulic flow, wherein the flow control valve 18 operates to allow an optimum flow rate and divert the excess flow amount when the total hydraulic flow exceeds the optimum flow rate, the control system operates to disengage the secondary pump 30 when the total hydraulic flow exceeds a maximum flow level, the control system is selectively

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adjustable to a plurality of flow rates, and the sensor 90 is a direct fluid flow sensor. See Peterson col. 6, line 10 to col. 7, line 43.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chatterjea et al. or Peterson, as applied to claim 5 above, in view of Cobo et al. '162. Chatterjea et al. or Peterson disclose all of the claimed subject matter except for the sensor being an engine speed sensor.

Cobo et al. '162 teaches for an auxiliary hydraulic drive system with a total hydraulic flow, a primary hydraulic pump operable to provide hydraulic flow for an implement, a flow control valve in communication with the hydraulic flow, wherein the flow control valve operates to allow an optimum flow rate and divert the excess flow amount when the total hydraulic flow exceeds the optimum flow rate, and that there is an engine speed sensor or flow sensor to detect the total hydraulic flow for the purposes of determining the optimum flow rate. See Cobo et al. col. 3, line 27 to col. 4, line 11, and col. 6, lines 35-45.

Since Chatterjea et al., Peterson, and Cobo et al. are all auxiliary hydraulic drive systems, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the system of Chatterjea et al. or Peterson, based on the teachings of Cobo et

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al., to use an engine speed sensor to detect the total hydraulic flow for the purposes of determining the optimum flow rate.

Claims 12-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chatterjea et al. or Peterson, in view of Cobo et al. '162. Chatterjea et al. or Peterson disclose all of the claimed subject matter except for a controller coupled to an engine speed sensor and a variable output pump.

Cobo et al. '162 teaches for an auxiliary hydraulic drive system with a total hydraulic flow, a primary hydraulic pump operable to provide hydraulic flow for an implement, a flow control valve in communication with the hydraulic flow, wherein the flow control valve operates to allow an optimum flow rate and divert the excess flow amount when the total hydraulic flow exceeds the optimum flow rate, and that there is a controller coupled to an engine speed sensor or flow sensor to detect the total hydraulic flow and a variable output pump for the purposes of determining the optimum flow rate. See Cobo et al. col. 3, lines 3-5, col. 3, line 27 to col. 4, line 11, and col. 6, lines 35-45.

Since Chatterjea et al., Peterson, and Cobo et al. are all auxiliary hydraulic drive systems, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the system of Chatterjea et al. or Peterson, based on the teachings of Cobo et al., to use a controller coupled to an engine speed sensor to detect the total hydraulic flow and a variable output pump for the purposes of determining the optimum flow rate.

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Prior Art

Prior art made of record but not relied upon is considered pertinent to Applicant's disclosure and consists of fourteen patents.

Brinkman (6,789,387), McGowan et al. (6,360,538), Cobo et al. (6,173,572), Kobayashi (5,537,819), and Aoyagi et al. (4,768,339) are cited to show hydraulic drive systems optimizing system flow and system efficiencies.

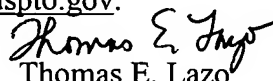
VanDerZyl et al. (6,430,850), Peterson (6,293,765), Kamiya (6,293,099), Unger et al. (4,558,629), Igarashi et al. (4,507,057), Bianchetta (4,354,420), Lorimor (4,141,280), Finley (4,121,501), and Rosander (3,940,930) are cited to show auxiliary hydraulic drive systems optimizing system flow.

Contact Information

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Thomas Lazo whose telephone number is (571) 272-4818. The examiner can normally be reached on Monday-Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Edward Look, can be reached on (571) 272-4820. The fax phone number for this Group is (703) 872-9306.

Any inquiry of a general nature or relating to status of this application or proceeding should be directed to the Patent Application Information Retrieval (PAIR) system. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.


Thomas E. Lazo
Primary Examiner
Art Unit 3745

TEL
February 23, 2005